



No.0020

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### *Announcement :*

#### **42nd Wireless World Research Forum, Tokyo, Japan**

Wireless World Research Forum (WWRF) is a group studying the wireless communication technology based in Europe. The 42nd WWRF meeting will be held in conjunction with WWRF's premiere event, the 6th 5G Huddle in Tokyo, Japan.

This event will look in detail at the truth behind this vision of 5G. The theme, “The 5G dream becomes real? will it keep its promises?” not only encompasses technology, but also associates it to the relevant business domains, together defined as the Business Ecosystem. Academics, researchers and industrial representatives will be invited to share their views and present technical results on future technologies, business models and ecosystems, to discuss critical business and regulatory aspects, and to present advanced technology findings that will impact the future socio-techno-economic systems.

WWRF asked the Fifth Generation Mobile Communication Promotion Forum (5GMF) for assistance to hold WWRF meeting and 5G Huddle in Japan. 5GMF is preparing for a meeting invitation as follows.

Title: 42nd Wireless World Research Forum / 6th 5G Huddle

Theme: “The 5G dream becomes real – will it keep its promises?”

Hosted by WWRF, In partnership with 5GMF

Date: 14 May – 16 May, 2019

Venue: Aoyama TEPIA (2-8-44 Kita-Aoyama, Minato-ku, Tokyo 107-0061)

URL:

<https://5gmf.jp/en/news/20181220135603/>

<http://wwrf42.ch/>

<http://5ghuddle.com/>

## *Topics*

### **5GMF's 1st Security Study ad hoc Workshop**

"The 1st Security Study ad hoc Workshop" was held on 1 October 2018, hosted by Security Study ad hoc, Strategy & Planning Committee, 5GMF, which had been established in June 2018. Aiming at sharing progress in studying security of 5G, lectures on the Topics of the Ad hoc (IoT, Connected Vehicle, FinTech) and standardization at 3GPP were delivered.

1. Title of the Workshop: "The 1st Security Study ad hoc Workshop"
2. Date and Time: 1 October 2018, 14:00 to 17:30
3. Location: ARIB Conference Room (Tokyo, Japan)
4. Organizers: Security Study ad hoc, Strategy & Planning Committee, 5GMF
5. Participants: About 50
6. Program:
  - Opening Remarks
  - Prof. Satoru Tezuka, Keio University
  - (1) Approach to 5G Security issues
  - Prof. Satoru Tezuka, Keio University

- The outline of Society 5.0 and 5G systems were presented, and it was explained that cyber security as their basic technology was required to be enhanced. As study items of ad hoc, it was introduced that the issues of 5G security were clarified and the security requirements on three use cases (IoT, Connected Vehicle, FinTech) were to be extracted and organized.
- (2) Standardization trend in 5G Security
- Mr. Ayumu Kubota, KDDI CORPORATION
- Standardization activity status of 5G security in 3GPP SA3 was introduced, and the change of trust model from 4G, and the issues on 5G phase 2 security (Release 16) was explained.
- (3) Security on the three use cases (IoT, Connected Vehicle, FinTech)
- Mr. Kazuhiko Ishii, NTT DOCOMO, INC.
- As achievement on IoT security in 5G, guidelines / standards on domestic and overseas IoT security were presented. The policy on picking study items in future ad hoc activities was also described.
- Mr. Toshiaki Tanaka, KDDI CORPORATION
- The services realized in the Connected Vehicle society, the structure and the realization technology of the connected vehicle, and the issues on 5G security to realize the Connected Vehicle were introduced.
- Mr. Takashi Kawano, Hitachi, Ltd.
- There was introduction of major FinTech service, FinTech service realized by 5G and security technology.
- (4) <Special lecture> The future of Cashless Payment
- Mr. Masayuki Yamamoto, Yamamoto International Consultants
- Trend in payment service and vision of cashless society were presented.

Showing attention and expectation for 5G security, opinions about policy on the Ad hoc activities were actively exchanged together.



5GMF's 1st Security Study ad hoc Workshop

## 5G International Workshop 2018 in Chiba

"5G International Workshop 2018" was held on the theme of "Frontiers in 5G partner cooperation", as a session program of CEATEC JAPAN 2018. More than 500 people (fully occupied) participated. Experts from both domestic and overseas, and project representatives working on 5G regional partnerships, were invited as panelists.

1. Title of the Workshop: "5G International Workshop 2018"
2. Date and Time: 17 October 2018
3. Location: Makuhari Messe International Conference Hall, (Chiba, Japan)
4. Organizers: MIC (Ministry of Internal Affairs and Communications)  
Coorganizer: 5GMF (The Fifth Generation Mobile Communications Promotion Forum)

5. Participants: More than 500

6. Program:

◇ Opening Remarks

Mr. Shigeki Suzuki, Vice-Minister for Policy Coordination, MIC

◇ Keynote Speech

Prof. Susumu Yoshida, Chairman of 5GMF

Session1: Activities toward realization of 5G in 2020

"5G Initiatives in Japan"

Mr. Gaku Nakazato, MIC

Session2: Attempts to Collaborate Partners by Mobile Network Operators

"DOCOMO'S Approach to the 5G Era - Collaboration with Partner Companies -"

Mr. Tetsuya Mikajiri, NTT DOCOMO

"Creating New Experience by 5G with partners"

Mr. Akira Matsunaga, KDDI

"5G x IoT Studio" and Co-creation"

Mr. Hideto Funayoshi, SoftBank

Session3: Regional Attempts to Collaborate Partners

"5G Industry and Spectrum"

Dr. Håkan Ohlsén, Ericsson

"5G Global Collaboration and Vertical Trials in Korea"

Prof. HeyonWoo Lee, Dankook University

"Indonesia i5GF: Contributions and Cooperations on 5G for Regional/Local Impacts"

Associate Prof. Khoirul Anwar, Telkom University

"Visualization of SAKE production process by data"

Mr. Tomoyuki Takahashi, Aizuwakamatsu City

"5G Satellite Office -Tokushima Prefecture-"

Mr. Toru Sumida, PLAT EASE Corporation

At the end of Session3, the moderator Prof. Seiichi Sampei of Osaka University summarized that as the labor force declines, collaborating with enterprise partner and cost design using 5G will be more important, in order to maintain society.

### Panel Discussion: Outlook for Extending 5G Partner Collaboration

The moderator Mr. Takehiro Nakamura of NTT DOCOMO summarized as follows.  
“It is important to promote 5G to industry not familiar with 5G and share the best practices. We should promote discussions involving the vertical industries.”



Presenters and Speakers

## The 31st ITU-R WP5D Meeting in Fukuoka

The 31st ITU-R WP5D Meeting was held as below.

### 1. Overview of the meeting

Schedule	9 - 16, October 2018
Venue	ACROS Fukuoka (Fukuoka, Japan)
Participants	196 people from 34 countries (36 organizations)
Participants from Japan	21 people (including 3 people from ARIB) headed by Mr. Nishimuro (Deputy Director of Land Mobile Communications Division, MIC)



The 31st ITU-R WP5D Meeting

## **2. Main results**

- (1) Since update information for IMT-2020 wireless interface proposal including provisional self-evaluation results was input from IMs (Individual Members) of 3GPP, Korea, China and ETSI / DECT Forum, the IMT-2020 documents (IMT-2020/3-7) have been updated.
- (2) As for the IMT-2020 radio interface evaluation, the initial evaluation result for the 3GPP proposal was input from TPCEG (Trans-Pacific Evaluation Group), an independent evaluation group (IEG) in Taiwan, and the new IMT-2020 document (IMT-2020/8) was drafted.
- (3) As for the revision of the 13th edition of Recommendation ITU-R M.1457 on radio interface, the draft reflecting the hyperlink information of the CDMA DS and CDMA TDD transposing organizations was agreed to be provided for approval in SG 5.
- (4) China Mobile proposed to start discussion on the coexistence of TDD networks, and the discussion was decided to be started, in particular on the relationship between network synchronization/asynchrony and interference.
- (5) The draft revision of Report ITU-R M.2373 on Audio-visual capabilities and applications supported by terrestrial IMT systems was completed and submitted to SG 5.
- (6) A draft new Report ITU-R M.[IMT.USAGE] on the emerging usage of terrestrial component of IMT, was completed and submitted to SG 5.
- (7) A draft new Report ITU-R M.[IMT.MTC] on the use of the terrestrial component of IMT for Narrowband and Broadband MTCs, was completed and submitted to SG 5.
- (8) On the coexistence study of the L-band IMT and the BSS system (WRC-19 agenda 9.1, issue 9.1.2), a new report was drafted reflecting the proposal from Japan.
- (9) As for the study on IMT systems using High Altitude Platform Station (HAPS) to base stations, it was agreed first to jointly study co-channel sharing involving the use of HAPS as IMT base stations based on the proposal from Japan, and then a workplan and a working document towards a preliminary draft new report were created.

## **3. Next meeting schedule and the after**

The next 31th bis meeting is scheduled to be held in Geneva from 11 to 15 February 2019. For the 35th meeting to be held in July 2020 and the 36th meeting in October 2020, China and India were tentatively stated as a host country, respectively.

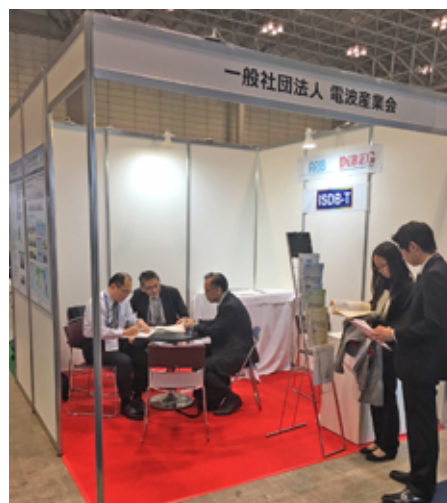


## Participation in the InterBEE 2018

The 54th InterBEE 2018 was held at the Makuhari Messe in the neighbor of Tokyo from 14th through 16th November 2018, where ARIB/DiBEG participated in the exhibition. It was the five consecutive years of participation for ARIB/DiBEG. The InterBEE announced that there were 1,152 companies/organizations participated in the exhibition this year, the largest number of exhibitors in its history, with 64 foreign participants from 33 countries/areas.

With the new 4K8K satellite broadcasting service soon to be launched in Japan in December, many of the exhibitors displayed and demonstrated 4K8K-related technologies and systems as well as IP transmission- related products. Also there were many exhibits and demonstrations related to the artificial intelligence (AI) and virtual reality (VR) technologies being applied to broadcasting operations, attracting the attention of many people in the exhibition hall.

At the ARIB/DiBEG booth the latest situation of standardization activities in the field of broadcasting were shown together with international activities in the ISDB-T promotion. Among the inquiries received from the visitors during the exhibition included technicalities on UHDTV and the latest status of digital TV implementation in other countries.



Exhibition Booth of ARIB/DiBEG

## The 17th CJK IT Standards Meeting at Matsue

CJK Meeting on Information and Telecommunication Standards started on June 2002 with an initiative of ARIB of Japan, CCSA of China, TTA of South Korea, and the TTC of Japan to promote mutual cooperation among the standards development organization of Japan, China and South Korea more actively.

The 17th CJK IT Standards Meeting was held in October 2018 at Matsue, Japan.

1. Date: 24-26 October 2018
2. Location: MATSUE EXCEL HOTEL TOKYU (Matsue, Japan)
3. Host: ARIB, TTC
4. Participants: About 30
5. Program:
  - (1) SDO Presentations:  
Recent Activities of each SDO
  - (2) Strategic Sessions:  
"Smart City", including "IoT" and "Information Security" as elements of it

(3) Report from WGs:

IMT, IS (Information Security), WPT (Wireless Power Transmission),  
NSA (Network Service Architecture), TACT (Administrative Issue)

(4) HoD Ad Hoc

Discussion about remaining issues, among HoDs and the selected experts

(5) Closing Session:

It was concluded that study for establishing ITS WG should be started, and that future activities of IS WG and NSA WG should be reviewed after the establishment of ITS WG. It was announced by CCSA that the next CJK-18 meeting would be scheduled to be held in April 2020 at Hangzhou, China.



Participants



Plenary Meeting

**Commencement of 3.5GHz band Frequency Sharing Study  
by ARIB as Consulting Services**

ARIB began conducting 3.5GHz band Frequency Shearing Study (calculation of interference between mobile phone base stations and satellite earth stations) from 1 December 2018, as part of the consulting services.

This work is to be carried out based on the suggestion of Radio Policy 2020 Panel under MIC that confirmation by a third party organization of possibility for frequency sharing is effective, instead of the conventional way: individual preliminary adjustment between licensees.



## The 6th Global 5G Event in Rio de Janeiro

The 6th Global 5G event was organized by 5G Brazil in 28 - 29 November 2018 in Rio de Janeiro, Brazil. More than 200 government officials, experts and industry associates from all over the world gathered, and active discussions were held with the theme of "5G Technology Changing Paradigms of a New Society". Also, on 30 November, the IEEE 5G Summit Rio was held together, and about 100 people participated mainly from Brazil.

In the event, there were concrete reports in various fields such as the frequency policy of each country, standardization, the latest progress in verification test, efforts to address specific problems in each area, business opportunities, commercialization plan, chipset, research and technology trends, and Beyond 5G, etc. That 5G commercial service was finally becoming a reality was impressed.



Venue



Session

### Overview of the Event

Date	28 - 29 November 2018
Venue	Pestana Hotel (Rio de Janeiro, Brazil)
Organizer	5G Brazil
Presenters	About 70 moderators and speakers, including 5 from Japan
Participants	Over 200, including 5G promotion organizations, experts, industry experts and government officials from Japan, US, Europe, China, Korea and Brazil.
Website	<a href="http://6thglobal5geventbrazil.org.br/en/home/">http://6thglobal5geventbrazil.org.br/en/home/</a>

### Summary

#### ◇ Opening Session: "Government Policies for 5G"

There were six presentations on national and regional policies towards 5G. Mr. Gaku Nakazato, Director of the New-Generation Mobile Communications Office at the MIC gave a presentation on "5G Progress Status in Japan", in which he

discussed the current status and policies of 5G as we near 2020, including 5G Field Trials, frequency allocation, and other joint studies.

Panel 1: “5G Ecosystem, Challenges for its Development”

Seven presentations were given on the construction of 5G ecosystems in different countries. Fujitsu’s Mr. Takaharu Nakamura gave a presentation entitled “The Dawn of 5G”, in which he discussed activities to realize the future possibilities of a Human Centric Intelligent Society.

Panel 2: “5G for Remote Areas: Challenges and Opportunities”

Six presentations were featured in the session. KDDI’s Ms. Yoko Kurosawa gave a presentation entitled “Creating New Experience with Partners by 5G”, in which she discussed the activities with partners in how to deal with various challenges of social issues, using examples such as snow removal and SAKE brewing.

Panel 3: “Spectrum Harmonization and Regulatory Issues”

The session had seven presentations on frequency allocation. Mr. Gaku Nakazato of MIC gave a presentation entitled “5G Progress in Japan”, on the fundamental policy behind frequency allocation in Japan, as well as what the current competitive criteria for allocation will be, and concrete promotion plans going forward.

Panel 4: “The Standardization of 5G”

The session was moderated by 5GMF Secretary General Dr. Kohei Satoh. There were seven presentations on the activities of the ITU-R, 3GPP, as well as in individual countries. The discussion touched upon the activities of the Global 5G Events and shared the need for further discussion of “5G+AI” and “Beyond 5G” at Global 5G Events.

Panel 5: “5G Research and Technological Trends”

Seven presentations were featured from different countries. Mr. Takaharu Nakamura from Fujitsu gave a presentation entitled “Stepping Forwards to 5G”, in which he discussed the explosive growth of new traffic, technology for the millimeter waves, smart antenna technology and the relationship between distance and latency.

Panel 6: “Infrastructure for 5G”

Seven presentations were featured from different countries. KDDI’s Ms. Yoko Kurosawa discussed 5G marketization in a presentation entitled “5G/IoT x Digital Transformation”, with examples from KDDI.

Panel 7: “5G Trials and Pre-Commercial Launches”

The session had seven presentations. Dr. Yukihiro Okumura of NTT DOCOMO gave an overview of the MIC’s 5G Field Trials in 2018 in his presentation entitled “5G System Trials in Japan”.

Panel 8: “5G Vertical Markets and Use Cases”

The session included seven presentations. Dr. Yukihiro Okumura of NTT DOCOMO discussed “Co-Creation of New Services and Resolution of social issues by Utilizing 5G”, illustrated with examples from NTT DOCOMO.

The next 7th Global 5G Event will be held in the city of Valencia in Spain on 17-18 June 2019.

## oneM2M Industry Day Kanazawa

“oneM2M Industry Day Kanazawa” was held in December 2018.

1. Date: 5 December 2018
  2. Venue: Ishikawa High-Tech Conference Center (Kanazawa, Japan)
  3. Organizers: oneM2M Technical Plenary, ARIB, TTC (Telecommunication Technology Committee), NICT (National Institute of Information and Communications Technology), JAIST (Japan Advanced Institute of Science and Technology)
  4. Supporter: Hokuriku Regional Bureau of Telecommunications, MIC
  5. Participants: About 115 (including about 40 members from oneM2M)
  6. Overview:
    - As oneM2M TP (Technical Plenary) meeting had been scheduled in Kanazawa city (Ishikawa Prefecture, Japan), an IoT workshop "oneM2M Industry Day" was organized at the same time. The latest development of IoT platform, business strategies and initiatives of each company were presented by experts of oneM2M, along with the examples of introducing IoT and Smart City overseas.
    - From Japan, in addition to introducing case studies and initiatives of companies (especially in Hokuriku) that actively applied IoT to manufacturing and business, a visit to JAIST and NICT where achievement in R&D and the testbed were arranged.
  7. Program:
    - ◇ Opening Remarks  
Mr. Norikazu Yamazaki, KDDI
    - ◇ Congratulatory Address  
Mr. Luis Jorge Romero, ETSI
    - ◇ Keynote Speech: Expectation for the Activities of oneM2M
      - Industry promotion by IoT and Regional Revitalization -  
Mr. Kazuharu Yamada, MIC
    - ◇ Introduction of oneM2M  
Mr. Omar Elloumi, oneM2M / Nokia
    - ◇ oneM2M Service Layer and Interworking with 3GPP 4G/5G Network  
Mr. Dale Seed, oneM2M / Convida Wireless
- Session 1: “IoT in Industries in Hokuriku”
- “Approach of I-O DATA to IoT”  
Mr. Akira Hirabayashi, I-O DATA DEVICE, INC.
  - “Embedded business at PFU and Initiative to Mass Customization”  
Mr. Yoshifumi Hashimoto, PFU Limited
  - “Construction Production Process and Reforming IoT Open Platform: LANDLOG”  
Mr. Kousaku Igawa, LANDLOG Ltd.

◇ Introduction to / Tour of iHouse and StarBED

Prof. Youichi Shinoda, JAIST / NICT

Prof. Yasuo Tan, JAIST / NICT

Prof. Van Cu Pham, JAIST

Session 2: “IoT / Smart city in each Country realized by oneM2M”

“City Hub: Development of Data Driven Sustainable Smart City in Korea”

Prof. Song JaeSeung, Korea Electronics Technology Institute / Sejong University

“The Role of IoT Interoperability in Smart Mobility”

Mr. Mahdi Ben Alaya, Sensinov

“Expansion of Connection, Development to Industry, and Promotion of Industrial IoT (IIoT)”

Mr. YongJin Zhang, Huawei

Session 3: “IoT in Japan”

“Privacy Protection Architecture using oneM2M”

Mr. Nobuhiro Okui, KDDI Research, Inc.

“Hitachi's approach to digitization”

Mr. Tetsuhiko Hirata, Hitachi, Ltd.

“A Consideration on the Relationship between oneM2M and 3GPP”

Mr. Yuusuke Nakano, KDDI

“Standardization Trend of IoT utilizing LTE / 5G and NTT DOCOMO's initiatives”

Mr. Satoshi Nagata, NTT DOCOMO

◇ Closing Remarks

Mr. Omar Elloumi, Nokia



Session



Exhibition

## The 4th Workshop on Connected Vehicle using LTE / 5G

“The 4th Workshop on Connected Vehicle using LTE / 5G” was held in December 2018.

### Overview

Date	12 December 2018
Venue	ARIB (Tokyo, Japan)

Organizer	Co-organized by following three Organization - LTE V2X Ad hoc, Mobile Partnership Subcommittee, Advanced Wireless Communications Study Committee, ARIB - 5G Connected Vehicle Ad hoc, 5GMF - Cellular System TG, Advanced ITS Info-communication Systems Committee, ITS Info-communications Forum
Participants	Over 120

### Program

Session1	Title		Speaker
	Democratization of Automated Driving		Prof. Shinpei Kato Tier IV, Inc. / The University of Tokyo
	Summary		
	Results of the verification test regarding the automated driving technology realized by the open source software "Autoware" as the platform, were reported through many videos. As a 5G killer contents, it was reported that it would be possible to remotely monitor many vehicles and to enjoy a world where rich VR using 4K or 8K without feeling delay would be realized.		
Session2	Title		Speaker
	Necessity of Communication in Automated Driving - Present and Trend -		Mr. Tsuguo Nobe Intel Corporation / Nagoya University
	Summary		
	The lecture was on the necessity of communication in automated driving. The following aspects were reported. - The vehicle as a sensor builds a map database on the cloud that is constantly updated by communication, not only increasing convenience but also enabling safe driving as well as enabling risk reduction. - As mobility optimization (MaaS) advances, it is possible to grasp the flow of people, things and energy by using mobility cloud, and to optimize cities. - Communication is essential for the future, and data and software become important.		
Session3	Title		Speaker
	Discussion on issues about Connected Vehicle using LTE / 5G		Mr. Takehiro Nakamura Mr. Shinpei Yasukawa Cellular System TG, Advanced ITS Info-communication Systems Committee
	Summary		
	The white paper under the development in the cellular system TG was introduced by Mr. Nkamura and Mr. Yasukawa. Participants discussed the content of the white paper and policies of editing it.		

Finally, it was announced that the cellular TG would be held about once a month and that “The 5th Workshop on Connected Vehicle using LTE / 5G” was scheduled to be held at the end of fiscal 2018.



The 4th Workshop on Connected Vehicle using LTE / 5G

### VSC Seminar 2018

ITS Info-communications Forum (ITS-Forum) held the “Vehicle Safety Communications (VSC) Seminar 2018 - The results of the international conference concerning VSC and the activity report of the Forum -” on 17 December 2018 at the Meiji-Kinenkan Hall in Tokyo, Japan. About 130 people from ITS related ministries / organizations and member companies of ITS Info-communications Forum participated in the event.

The program of the Seminar was as follows.

Session	Title	Speaker
	(Greeting by Guest)	Mr. Yasuo Tawara Director-General of the Radio Department, MIC
<b>[Report 1] International Trend of Advanced Driving Support System and Automated Driving System</b>		
(1)	“World Trend focusing on Automated Driving” - From Automated Vehicles Symposium 2018, ITS America 2018 Annual Meeting, ITS World Congress 2018 Copenhagen, SIP-adus Workshop -	Mr. Takahiko Uchimura Senior Vice President, ITS Japan



(2)	Initiatives by MIC on Wireless System for Connected Car, Cooperative ITS and Automated Driving - Report of ITS World Congress, The Situation Surrounding the Frequency Band Assignment to ITS -	Mr. Gaku Nakazato Director of New-Generation Mobile Communications Office, MIC
(3)	International Trend of Next Generation ITS using Millimeter Wave Technology	Mr. Kazuaki Takahashi Chairman, Millimeter Wave WG, ITS-Forum
(4)	The Road To Global V2X Deployment - Unified solution supporting US/EU, Japan and China -	Mr. Ram Shallom Autotalks Ltd. VP of Marketing & Business Development APAC
(5)	Next-generation smart mobility and smart motorcycle service	Mr. Henry Meng Institute for Information Industry Deputy Director General
<b>[Part 2] International Standardization Trend of ITS Radio System</b>		
(1)	WRC-19 AI 1.12 “ITS Application” AI 1.16 “Wireless LAN at 5GHz Band”	Mr. Satoshi Oyama Chairman, VSC-TG, International Relations Committee, ITS-Forum
(2)	International Trend in Standardization of V2X-based Driving Support System	Mr. Masanori Misumi Chairman, International Relations Committee, ITS-Forum
<b>[Part 3] Progress in Study of Next Generation Wireless Communication System</b>		
(1)	Wireless Communication System for Automated Driving System a) Progress in Study of Radio Communication for Automated Driving (Overview) b) Progress in Study of Cellular-V2X	a) Mr. Masaharu Hamaguchi Chairman, Radio System Technology TG, ITS-Forum b) Mr. Shinpei Yasukawa Cellular System TG, Advanced ITS Info-communication Systems Committee, ITS-Forum



VSC Seminar 2018

### **Digital Terrestrial TV Seminar in El Salvador**

El Salvador had decided to adopt ISDB-T as its national digital terrestrial television (DTTV) standard in January 2017. The Ministry of Internal Affairs and Communications of Japan (MIC) signed a memorandum of cooperation in the field of DTTV with the Superintendencia General de Electricidad y Telecomunicaciones (SIGET) in May 2017. This time, SIGET held a ceremony to commemorate the commercial operation of DTTV service by Televisión de El Salvador (TVES), its national TV; and at this occasion SIGET organized a DTTV seminar in San Salvador on 20 December 2018, participated by approximately 60 people.

The El Salvadoran side was headed by Ing. Edgard Rodas, Telecommunications Director of SIGET, followed by many of the government officials, key executives of the broadcasting industry, etc. The Japanese delegation was headed by Mr. M. Yoshida, Director-General of the Global Strategy Bureau of MIC, together with other MIC executives and representatives from ARIB/DiBEG member companies such as JTEC (Japan Telecommunications Engineering and Consulting Service) and Maspro Denkoh Corporation, as well as representatives from ARIB/DiBEG secretariat.

At the beginning of the Seminar, Director Rodas of SIGET and Director-General Yoshida of MIC each made a welcome speech, followed by Mr. Carlos Valle, Digital TV Project Manager of SIGET, explaining the latest progress in the DTTV implementation in El Salvador, including the cooperation and assistance from Japan, benefits and advantages of DTTV services, significance of Emergency Warning Broadcast System (EWBS), newly available services by DTTV, etc.

The representative from MIC introduced the latest status of DTTV services in Japan and its future prospects; the representatives from ARIB/DiBEG explained its activities of support and cooperation to ISDB-T adopting countries, together with international promotion of transmitting systems, receiving products and EWBS.

Mr. K. Higuchi, Ambassador Extraordinary and Plenipotentiary of Japan to El Salvador, made a speech successfully concluding the Seminar.

At the exhibition booth area, the Japanese representatives showed and introduced activities of DiBEG for ISDB-T promotion, indoor reception antennae, set-top box products, together with EWBS demonstration.



Seminar



Exhibition

<b>Monthly seminars on radio wave use (Oct.-Dec. 2018)</b>
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<b>No.162</b>	7 November 2018
<b>Title</b>	5G in Europe - are the field trials getting us there?
<b>Speaker</b>	Dr. Hendrik Berndt Former Chief Technology Officer & Chief Science Officer of DOCOMO's Communications Laboratories in Europe.
<b>No.163</b>	4 December 2018
<b>Title</b>	Introduction of ITS Japan's Initiative to Install DSSS On-board Equipment to Ambulance
<b>Speaker</b>	Mr. Hideaki Suganuma Leader of Next Generation Ambulance Development Taskforce, ITS Japan Mr. Toshinori Utsuki Head of Planning Group, ITS Japan
<b>No.164</b>	13 December 2018
<b>Title</b>	Introduction of "Action Plan for Realignment of Frequencies" (Revised in November 2018)
<b>Speaker</b>	Mr. Shigeki Miyazawa Deputy Director of Radio Policy Division, Land Mobile Communications Division, MIC

## 1. Newly established Standards at Standard Assembly on 11 October 2018

### **IMT Systems based on 3GPP Specifications (STD-T120 Ver.1.0)**

This standard relates to the international standard IMT Systems (International Mobile Telecommunications Systems) based on the technical specifications of 3GPP (Third Generation Partnership Project), and it describes system specifications such as radio access, core transport network, codec, security, service functions.

Based on the fact that 3GPP technical specifications covers 3rd and 4th generation, the conventional standards (3rd generation: STD-T63, 4th generation: STD-T104) were integrated into the new standard describing specifications from Release8 to Release15 which had been updated by July 2018. The new standard is re-defined as 3GPP Specifications (ARIB STD-T120 Ver. 1.00).

## 2. Revised or abolished Standards at Standard Assembly on 11 October 2018

### (1) Telecommunications field

None

### (2) Broadcasting field

STD Number	Standard Name	Version
STD-B58	INTERFACE FOR UHDTV PRODUCTION SYSTEMS	Ver.2.0
STD-B60	MMT-BASED MEDIA TRANSPORT SCHEME IN DIGITAL BROADCASTING SYSTEMS	Ver.1.13
STD-B62	MULTIMEDIA CODING SPECIFICATION FOR DIGITAL BROADCASTING (SECOND GENERATION)	Ver.2.0